

[COMMUNICATION]

Lepocreadium misakiense* sp. n. and *Neopechona olssoni* (Yamaguti, 1934), comb. n. (Trematoda: Lepocreadiidae), Parasites of a Japanese Marine Fish, *Scomber japonicus

TAKESHI SHIMAZU

Nagano-ken Junior College, 49-7 Miwa 8-chome, Nagano 380, Japan

ABSTRACT—*Lepocreadium misakiense* sp. n. from the intestine of *Scomber japonicus* taken in Aburatsubo Bay, Misaki, Kanagawa Prefecture, Japan, is most closely similar to *L. bimarinum* Manter, 1940, in the extent of the vitellaria but different from it in having a funnel-shaped oral sucker and the vitellaria distributed from the ovarian level to the posterior end of the body. *Neopechona olssoni* (Yamaguti, 1934), comb. n., is proposed for *Opechona olssoni* (Yamaguti, 1934) Yamaguti, 1938 (= *Pharyngora olssoni*) parasitizing the intestine of *S. japonicus*, because of the presence of the uroproct.

The flukes reported in this paper were collected from one individual (155 mm in fork length) of *Scomber japonicus* taken in Aburatsubo Bay, Misaki, Kanagawa Prefecture, on the Pacific coast of central Japan on July 19, 1983. The worms were flattened, fixed in Schaudinn's solution, stained with Heidenhain's iron hematoxylin and mounted in Canada balsam. They are deposited in the collection of the National Science Museum (Natural History), Tokyo. Some related specimens borrowed from the collection of the Meguro Parasitological Museum, Tokyo, were also studied.

Family Lepocreadiidae
Lepocreadium misakiense sp. n.
(Fig. 1)

Host: *Scomber japonicus* (Scombridae).

Site of infection: Intestine.

Locality: Aburatsubo Bay, Misaki, Kanagawa

Prefecture.

Date: July 19, 1983.

Specimens: NSMT-PI 2925 (holotype, 5 paratypes and 1 immature specimen).

Description (based on 6 gravid whole-mounts): Body elongate, 1.03–1.46 mm long by 0.25–0.32 mm wide; forebody 38–46% of total body length. Tegumental spines not seen. Eyespot pigment granules scattered on each side of esophagus. Oral sucker funnel-shaped, terminal, 0.12–0.15 mm long by 0.13–0.16 mm wide. Prepharynx long, 0.08–0.16 mm long. Pharynx pyriform or square, 0.06–0.09 mm long by 0.07–0.08 mm wide. Esophagus short, 0.04–0.06 mm long. Intestines simple, bifurcating slightly anterior to ventral sucker, terminating blindly near posterior end of body. Ventral sucker round, just preequatorial, 0.12–0.14 mm in diameter; sucker width ratio 1: 0.82–1.00.

Testes globular, contiguous, tandem or slightly diagonal, in middle third of hindbody, 0.07–0.12 mm long by 0.08–0.14 mm wide. Cirrus pouch claviform, scarcely extending behind ventral sucker, 0.10–0.14 mm long, containing spherical internal seminal vesicle, oval pars prostatica, prostatic cells and long and thick cirrus; no prostatic cells seen outside cirrus pouch. External seminal vesicle tubular, extending to midway between ventral sucker and ovary, 0.11–0.17 mm long. Genital atrium not seen. Genital pore usually a little submedian, between intestinal bifurcation and ventral sucker.

Ovary subspherical, entire, median or subme-

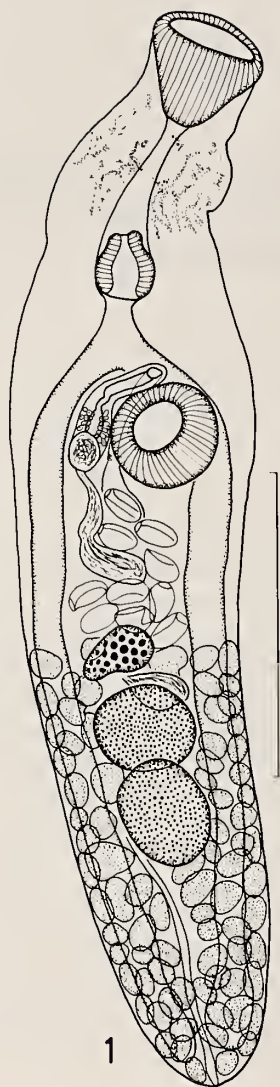


FIG. 1. *Lepocreadium misakiense* sp. n., holotype, entire worm, ventral view. Scale bar=0.4 mm.

dian, pretesticular, 0.05–0.08 mm long by 0.04–0.10 mm wide. Ootype complex lateral or posterolateral to ovary; Mehli's gland weakly developed. Laurer's canal present. Seminal receptacle postovarian. Uterus preovarian; metraterm well developed, provided with sphincter at posterior border. Eggs several, not embryonated, 50–60 by 30–40 μ m in balsam. Vitelline follicles rather large, distributed from ovarian level to posterior end of body, confluent in posttesticular space. Excretory vesicle I-shaped, reaching to

ovary; excretory pore posteroterminal.

Discussion: General morphology of these specimens agrees well with the diagnosis of the genus *Lepocreadium* Stossich, 1903 [1], though tegumental spines were not observed in any of them. It seems that most, if not all, of them have been lost in processing. *Lepocreadium misakiense* sp. n. most resembles *L. bimarimum* Manter, 1940 [2], in that the vitellaria do not extend anterior to the ventral sucker but that the new species differs from it in the shape of the oral sucker (funnel-shaped instead of rounded) and in a shorter extent of the vitellaria. Similarly, this new species is different from *Lepocreadium* sp. of Kruse (1975) [3], a possible metacercaria of *L. bimarimum*. The new species also bears some resemblance to *Cephalolepidapedon saba* Yamaguti, 1970 [4], but is distinguished from it by lacking scalelike spines around the oral aperture and by having a much shorter excretory vesicle.

***Neopechona olssoni* (Yamaguti, 1934), comb. n.**

Pharyngora olssoni Yamaguti, 1934 [5]: 328–331, fig. 36.

Opechona olssoni: Yamaguti, 1938 [6]: 47; Ichihara *et al.*, 1968 [7], 48–49, fig. 3; Yamaguti, 1971 [1]: 148.

Discussion: Four specimens (NSMT-PI 2926) of *Opechona olssoni* (= *Pharyngora olssoni*) were found together with those of the foregoing species in the intestine of the same fish. Their intestines proved to open into the excretory vesicle to form a uroproct near the posterior end of the body. Reexamination of the holotype and four paratypes of *O. olssoni* (MPM Coll. Nos. 22043 and 22044) [5] has shown the presence of the uroproct in them. Therefore, *O. olssoni* should be transferred to the genus *Neopechona* Stunkard, 1969 [8], as *N. olssoni* (Yamaguti, 1934), comb. n. This species is separated from two previously known species, *N. pyriforme* (Linton, 1900) Stunkard, 1969 [8], and *N. cablei* Stunkard, 1980 [9], by a larger and more elongate body and a funnel-shaped oral sucker. The cirrus and metraterm are unarmed in the species. In *N. pyriforme* these two organs are spinose [8]. Neither cirrus nor metraterm has yet been described for *N. cablei* [9].

Yamaguti [1] suggested that *O. olssoni* (now *N. olssoni*) might be a synonym of *O. orientalis* (Layman, 1930) Ward *et* Fillingham, 1934.

However, the former is readily distinguishable from the latter by a much larger, funnel-shaped oral sucker and the presence of the uroproct. This has been confirmed by comparing the above-mentioned specimens of *N. olssoni* with Yamaguti's [4, 10] specimens (MPM Coll. Nos. 22045–22048) of *O. orientalis*.

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